### SUBJECT INDEX

Vol. 131C, Nos. 1-4

Accumulation, 73 Accumulative toxicity, 1 Acetylcholine (ACh) receptors, 167 Adenylate, 335 110mAg, 367 Alkoxyresorufin O-dealkylase activity, 501 Alloxan diabetic rats, 19 Ammonia excretion, 303 Amphiura filiformis, 153 Anadara granosa, 123 Anatoxin, 167 Antidiabetic effect, 19 Antioxidant enzymes, 177, 447 Anucleated erythrocyte, 405 Apoptosis, 51 Aquatic toxicity assessment, 271 Arion lusitanicus, 259 Arsenic, 73, 355

Atresia, 51

Aurofusarin, 197

Beta-adrenergic receptors, 27 Biliary excretion, 355 Bioaccumulation, 185 Biodistribution, 295 Bioindicator, 123 Bioluminescence, 153 Biomarker, 123, 271 Biomarkers, 61, 133, 477 Biotransformation enzymes, 61 1,4-bis[2-(3,5-dichloropyridyloxy)]benzene, 501 Black porgy, 345 BNF, 61 Bovine serum albumin, 439 Brain acetylcholinesterase, 271 4-Bromophenacyl bromide, 315 Brush border membrane vesicles, 223

Ca<sup>2+</sup> channels, 511 Ca<sup>2+</sup> influx, 315 Ca<sup>2+</sup> mobilization, 315 Ca<sup>2+</sup>-ATPase, 405 Cadmium, 61, 123, 223, 231, 245, 281, 425 Cadmium binding protein, 425 Calcium, 153 Calmodulin, 405 Carotenoids, 197 Carp, 417 Carp, 335 Catecholamines, 27 Catfish, 335 Cation channel, 167 Channel catfish, 27 Charybdotoxin, 511 Chinese crab, 433 Chitons, 253 Chlordane, 469 Chlorpyrifos, 469

Chromatography, 425 Clams, 457 Cloning, 217 Cobalt chloride, 177 Cogent db, 19 Comparative, 207 Computer assisted sperm analysis, 335 Constitutively active receptor or constitutive androstane receptor, 501 Contamination, 457 Control, 469 Copper, 281 Coptotermes formosanus, 469 Corbicula fluminea, 133, 477 Cortisol, 39 Cortisone, 39 Crayfish, 395 Crotalus durissus terrificus, 295 Cylindrospermopsin, 167

Cylindrospermopsis raciborskii extract, 167

Cytochrome P450, 61, 161 Cytochrome P450 2B, 501 Cytochrome P4501A, 387 Daily variability, 253 Deficiency, 39 Depuration, 281 Detoxication enzymes, 469 Detoxification, 425 DHP, 345

Digestive gland, 259, 281

Discovery Bay, 253

Distribution, 73, 367

CYP1A, 387

Dietary, 73

Cypermethrin, 469

5α-Cyprinol sulfate, 1

Cyprinus carpio, 271

Dopamine D<sub>1</sub> receptors, 433

EC<sub>50</sub>, 531
Echinoderm, 153
ELISA, 323, 417, 531
Encapsulated venom, 295
Endocrine disrupters, 531
Endogenous opioid peptides, 379
Energy reserves, 457
Entrapped venom, 295
Enzyme, 39, 207, 259, 335
Epilepsy, 521
Epinephrine, 27
Epithelial cell, 223

Epinephsy, 321 Epinephrine, 27 Epithelial cell, 223 Eriocheir sinensis, 433 EROD, 387 Eserine, 271 17β-estradiol, 531 Estrogenic, 51 Ethanol, 161 17α-ethinylestradiol, 531 EtOH, 395

Gabaergic receptor, 521

Field study, 281 Fire coral, 323 Fish, 73, 231 Fish leukocytes, 27 Fishes, 9 Flavonols, 161 Fluo-3, 315 Formosan subterranean termite, 469 Fresh water, 133 Freshwater clam, 477 Fumonisin, 113 Fura-2, 315

Gastropoda, 259
Genomic DNA, 217
Gill, 185
Gills, 231, 281, 367, 433
Glibenclamide, 19
Glutamate, 9
Glutamate (GLU), 395
Glutathione, 177, 231, 447
Glutathione S-transferases, 207, 477
Glycosylated Hb, 19
Gonadotropin releasing hormone, 9
Grass carp bile juice, 1
Growth hormone, 93
Guinea pig, 355, 511
Guinea pig liver, 177

H<sup>+</sup> antiport, 223 H<sub>2</sub>O<sub>2</sub>-generating oxidases, 259 Half-life, 281 Halogenated aromatic hydrocarbons, 501 Hamster, 355 Heat-shock protein, 253, 387 Heat-shock protein (hsp70), 259 Heavy metals, 123, 245 Heme oxygenase, 177 Hemolymph ammonia, 303 Hemolymph urea, 303 Hepatopancreas, 259 Histopathology, 73 HPLC, 167 HSP70, 387 Human gingival fibroblasts, 315 Hydrogen peroxide, 447 Hydroxyl radicals, 439 11β-Hydroxysteroid dehydrogenase, 39 Hydroxysteroid oxidoreductase, 39 Hydrozoa, 323 Hypophysectomy, 93

Iberiotoxin, 511

### SUBJECT INDEX

Vol. 131C, Nos. 1-4

Accumulation, 73 Accumulative toxicity, 1 Acetylcholine (ACh) receptors, 167 Adenylate, 335 110mAg, 367 Alkoxyresorufin O-dealkylase activity, 501 Alloxan diabetic rats, 19 Ammonia excretion, 303 Amphiura filiformis, 153 Anadara granosa, 123 Anatoxin, 167 Antidiabetic effect, 19 Antioxidant enzymes, 177, 447 Anucleated erythrocyte, 405 Apoptosis, 51 Aquatic toxicity assessment, 271 Arion lusitanicus, 259 Arsenic, 73, 355

Atresia, 51

Aurofusarin, 197

Beta-adrenergic receptors, 27 Biliary excretion, 355 Bioaccumulation, 185 Biodistribution, 295 Bioindicator, 123 Bioluminescence, 153 Biomarker, 123, 271 Biomarkers, 61, 133, 477 Biotransformation enzymes, 61 1,4-bis[2-(3,5-dichloropyridyloxy)]benzene, 501 Black porgy, 345 BNF, 61 Bovine serum albumin, 439 Brain acetylcholinesterase, 271 4-Bromophenacyl bromide, 315 Brush border membrane vesicles, 223

Ca<sup>2+</sup> channels, 511 Ca<sup>2+</sup> influx, 315 Ca<sup>2+</sup> mobilization, 315 Ca<sup>2+</sup>-ATPase, 405 Cadmium, 61, 123, 223, 231, 245, 281, 425 Cadmium binding protein, 425 Calcium, 153 Calmodulin, 405 Carotenoids, 197 Carp, 417 Carp, 335 Catecholamines, 27 Catfish, 335 Cation channel, 167 Channel catfish, 27 Charybdotoxin, 511 Chinese crab, 433 Chitons, 253 Chlordane, 469 Chlorpyrifos, 469

Chromatography, 425 Clams, 457 Cloning, 217 Cobalt chloride, 177 Cogent db, 19 Comparative, 207 Computer assisted sperm analysis, 335 Constitutively active receptor or constitutive androstane receptor, 501 Contamination, 457 Control, 469 Copper, 281 Coptotermes formosanus, 469 Corbicula fluminea, 133, 477 Cortisol, 39 Cortisone, 39 Crayfish, 395 Crotalus durissus terrificus, 295 Cylindrospermopsin, 167

Cylindrospermopsis raciborskii extract, 167

Cytochrome P450, 61, 161 Cytochrome P450 2B, 501 Cytochrome P4501A, 387 Daily variability, 253 Deficiency, 39 Depuration, 281 Detoxication enzymes, 469 Detoxification, 425 DHP, 345

Digestive gland, 259, 281

Discovery Bay, 253

Distribution, 73, 367

CYP1A, 387

Dietary, 73

Cypermethrin, 469

5α-Cyprinol sulfate, 1

Cyprinus carpio, 271

Dopamine D<sub>1</sub> receptors, 433

EC<sub>50</sub>, 531
Echinoderm, 153
ELISA, 323, 417, 531
Encapsulated venom, 295
Endocrine disrupters, 531
Endogenous opioid peptides, 379
Energy reserves, 457
Entrapped venom, 295
Enzyme, 39, 207, 259, 335
Epilepsy, 521
Epinephrine, 27
Epithelial cell, 223

Epinephsy, 321 Epinephrine, 27 Epithelial cell, 223 Eriocheir sinensis, 433 EROD, 387 Eserine, 271 17β-estradiol, 531 Estrogenic, 51 Ethanol, 161 17α-ethinylestradiol, 531 EtOH, 395

Gabaergic receptor, 521

Field study, 281 Fire coral, 323 Fish, 73, 231 Fish leukocytes, 27 Fishes, 9 Flavonols, 161 Fluo-3, 315 Formosan subterranean termite, 469 Fresh water, 133 Freshwater clam, 477 Fumonisin, 113 Fura-2, 315

Gastropoda, 259
Genomic DNA, 217
Gill, 185
Gills, 231, 281, 367, 433
Glibenclamide, 19
Glutamate, 9
Glutamate (GLU), 395
Glutathione, 177, 231, 447
Glutathione S-transferases, 207, 477
Glycosylated Hb, 19
Gonadotropin releasing hormone, 9
Grass carp bile juice, 1
Growth hormone, 93
Guinea pig, 355, 511
Guinea pig liver, 177

H<sup>+</sup> antiport, 223 H<sub>2</sub>O<sub>2</sub>-generating oxidases, 259 Half-life, 281 Halogenated aromatic hydrocarbons, 501 Hamster, 355 Heat-shock protein, 253, 387 Heat-shock protein (hsp70), 259 Heavy metals, 123, 245 Heme oxygenase, 177 Hemolymph ammonia, 303 Hemolymph urea, 303 Hepatopancreas, 259 Histopathology, 73 HPLC, 167 HSP70, 387 Human gingival fibroblasts, 315 Hydrogen peroxide, 447 Hydroxyl radicals, 439 11β-Hydroxysteroid dehydrogenase, 39 Hydroxysteroid oxidoreductase, 39 Hydrozoa, 323 Hypophysectomy, 93

Iberiotoxin, 511

Ictalurus punctatus, 27 Immunity, 93 Immunocytochemistry, 9 Immunoglobulin, 93 In vivo, 417 In vivo fate, 295 Induction, 123 Inorganic anion exchanger, 223 Insecticide selection, 469 Interferon y (IFNy), 113 Intertidal zone, 253 Intestine, 185 Intracellular Ca2+ concentration, 315 Intraperitoneal administration, 417 Intravenous injection, 379 Invertebrate, 153 Isoforms, 245 Isolation, 207

Jamaica, 253 Joint action, 303

K<sup>+</sup> channels, 511 Kidney, 207 Koala, 39

Lagenorhynchus acutus, 245
Lake, 133
Lauric acid, 161
LC-MS, 531
Leucocyte, 93
LH, 379, 417
Ligand, 185
Lipid peroxidation, 177, 197, 447
Liposome, 295
Littorina brevicula, 425
Liver, 39, 113, 207, 231, 367
Liver and kidney dysfunction, 1
LLC-PK<sub>1</sub> cells, 223
Lysozyme, 93, 447

MALDI-TOF, 425 Male carp, 379 Marine invertebrates, 457 Marine mammals, 245 Marsupial, 39 Maturation-inducing steroid, 345 Medaka, 51 Melatonin, 521 Mercury, 185 Metal, 185 Metal binding protein, 425 Metal mixtures, 231 Metallothionein, 73, 217, 367, 425, 447 Metallothionein mRNA, 231 Metallothioneins, 123, 245 Methylation, 355 Methylmercury, 185 Mice, 113

Microsomal, 39 Microsomes, 161 Millepora, 323 MK-801, 9 Molluscan neurone, 167 Molluses, 253 Monitoring Cnesterodon decemmaculatus, 271 Monomethylarsonous acid, 355 Mouse, 355 MT20 metallothionein isoform, 217 Mu-class, 477 Muscarinic receptor, 521 Mussel, 447 Mva arenaria, 457 Mycotoxin, 197 Mytilus galloprovincialis, 217

Naltrexone, 379, 417 Nematocyst, 323 Nervous system, 153 Neuromuscular junction (NMJ), 395 Nitrogen excretion, 303 NMDA, 9 Nonylphenol, 51 Norepinephrine, 27 Nuclear receptor, 501 Nucleated erythrocyte, 405

Oocyte competence, 345 Oocyte maturation, 345 Ophiopsila aranea, 153 Ophiopsila californica, 153 Ophiopsila californica, 153 Opioid peptides, 417 Oral, 113 Organelle, 259 Ovary, 51, 387 Over-expression, 123 Oxidative stress, 177 Oxyhemocyanin, 303 Oysters, 281

p-Nitrophenol, 161
p-Nitrophenylphosphatase (p-NPPase) activity.
405
PAH, 387
PCB, 61
Perfusion, 185
pH, 223
Pharmacokinetic, 295
Phenobarbital-type chemical, 501
Phospholipase A<sub>2</sub>, 315
Phototoxicity, 439
Physico-chemical forms of storage, 281
Physiological status, 133
Phytotoxins, 167
Pi-class, 477

Phytotoxins, 167
Pi-class, 477
Pilocarpine-induced seizures, 521
Pimozide, 379, 417
Teleost fish, 27
Temperature, 253
Testes, 51

Plasma insulin, 19
Plasma-membrane Ca<sup>2+</sup>-ATPase (PMCA), 405
Polymerase chain reaction (PCR), 217
Polyplacophorans, 253
Prolactin, 93
Protein fragmentation, 439
Protein kinase C, 511
Puberty, 9
Purification, 207, 477

Quail, 395 Quercetin, 51

Rabbit, 355

20β-S, 345

Radioligand binding assays, 27 Rainbow trout, 367, 387, 531 Rat. 355 Rat liver, 161, 177 Rattlesnake, 295 Reactive oxygen species (ROS), 439 Reconquista River (Argentina), 271 Red blood cell, 405 Red Sea, 323 Red wine, 161 Redox balance, 447 Renal failure, 1 Reproduction, 9, 457 Reproductive cycle, 133 River, 133 Ryanodine, 511

Salmonid, 207 Sarcoplasmic reticulum, 511 SCH 23390, 433 SDS-PAGE, 439 Seasonality, 133 Secretion, 223 Sequencing, 217 Serum lipids, 19 Sex steroid feedback, 379 Sexual dimorphism, 9 Sexual maturation, 457 sGnRH-A, 417 Short-term effect, 379 Silver, 367 Slug, 259 Smooth muscle, 511 Species variations, 355 Sperm, 335 Stenotomus chrysops, 501 Subcellular fractionation, 367 Subcutaneous, 113 Superoxide anion, 93 Superoxide anions, 439 Synapse, 395

# Subject Index

Tetracycline, 439
Toxicity, 113
Toxicology, 73
Toxins, 323
Trachea, 511
Transcription factor, 501
Transport, 223
Tributyltin, 335
Tropical fish, 61

Trout, 93 Tumor necrosis factor- $\alpha$  (TNF $\alpha$ ), 113

Uptake, 223, 303 Urea excretion, 303 Urinary excretion, 355

Venoms, 323

Vitamin E, 197 Vitellogenesis, 457 Vitellogenin, 531

White-sided dolphin, 245

Zebrafish, 531 Zinc, 231, 281

## **AUTHOR INDEX**

Vol. 131C, Nos. 1-4

Al-Arabi, S.A.M., 61 Alves-Ferreira, M., 405 Amiard, J.C., 281 Amiard-Triquet, C., 281 Andres, S., 185 Araya, J., 161 Ausseil, O., 231 Azuma, T., 93

Bandiera, S.M., 387 Baron, C.L., 73 Bassères, A., 133 Bhandari, N., 113 Biegniewska, A., 335 Bjerregaard, P., 531 Blaise, C., 457 Bouquegneau, J.M., 245 Bubenik, G.A. 541 Burlando, B., 217, 447 Burnett, K.G., 27

Camargos, R.P.F., 295
Cavaletto, M., 447
Ceratto, N., 217, 447
Chan, M.K., 123
Chang, C.-F., 345
Chen, J.-C., 303
Chen, S.-K., 1
Cheng, S.-Y., 303
Christova, T.Y., 177
Chung, S., 425
Chyb, J., 379, 417
Connock, M., 259
Cooper, R.L., 395
Costa-Lotufo, L.V., 521
Csanaky, I., 355

da Silva, E.C.C., 405
Das, K., 245
de Bruin, V.M.S., 521
de F. Fonteles, M.Maria., 521
de la Torre, F.R., 271
de Oliveira, A.A., 521
Debrauwer, L., 477
Deng, J.-F., 1
Devos, P., 433
Dewael, Y., 153
Diamond, S.L., 387
Dondero, F., 217
Duridanova, D.B., 177
Dvorska, J.E., 197

Endo, T., 223 Enongene, E.N., 113 Epler, P., 379, 417 Evangelisti, V., 447 Evans, R.E., 73

Ferrari, L., 271 Ferreira-Pereira, A., 405 Finkenbine, S.S., 27 Flynn, K.M., 9 Freitas, T.V., 295 Furuyama, S., 315

Gagné, F., 457 Galvez, F., 367 Gauthier-Clerc, S., 457 Gayle, P.M.H., 253 Geffard, A., 281 Gernhöfer, M., 259 Gettys, T.W., 27 Ghezzi, A., 447 Gilles, R., 215 Goksøyr, A., 61 Gomes, R.T., 295 Gregus, Z., 355 Guajardo, V., 161

Hiripi, L., 167 Hogstrand, C., 367 Holbech, H., 531 Hwang, D.-F., 1 Hwang, G.S., 51

Iwata, H., 501

Jacob, V., 245 Janz, D.M., 51, 387

Köhler, H.-R., 253 Köhler, H.-R., 259 Khan, M.A., 439 Kim, Y., 425 Kiparissis, Y., 51 Kiss, T., 167 Klaverkamp, J.F., 73 Knigge, T., 259 Koh, C.-H., 425 Kong, S., 39 Korsgaard, B., 531 Kovács, A., 167 Kuboyama, N., 315 Kuwahara, M., 511

Lange, A., 231 Laporte, J.-M., 185 Lee, I.-S., 425 Lima, I.Sandro.P., 521 Lindholst, C., 531

Mallefet, J., 153 Mann, N., 259 Mason, R.P., 185 Mayer, G.D., 367 McKinnon, R.A., 39 Melgar, M.J., 207 Meredith, F.I., 113 Metcalfe, C.D., 51 Mikolajczyk, T., 379, 417 Miller, S.A., 9 Mo, J.Ling., 433 Mojarrabi, B., 39 Moriwaki, K., 315 Musarrat, J., 439

Nóvoa-Valiñas, M.C., 207 Nakao, S., 315 Narbonne, J.-F., 133, 477 Nascimento, V.S., 521 Negishi, M., 501 Niimi, A.J., 51 Nørum, U., 531

Ogata, Y., 315 Ollevier, F., 335 Orellana, M., 161 Othman, R., 123

Pérez-López, M., 207 Pari, L., 19 Park, I.-S., 425 Park, J.-S., 425 Parveen, Z., 259 Pedlar, R.M., 73 Pellerin, J., 457 Perry, C., 259 Povlsen, A., 531 Ptashynski, M.D., 73

Radwan, F.F.Y., 323 Revelo, M.P., 295 Riley, R.T., 113 Rodrigo, R., 161 Rose, J., 531 Rouimi, P., 477 Rurangwa, E., 335

Sakurai, T., 315 Salibián, A., 271 Salmijah, S., 123 Saravanan, G., 19 Schill, R.O., 253 Schreibman, M.P., 9 Scofano, H.M., 405 Segner, H., 231 Setchenska, M.S., 177 Sharma, R.P., 113 Skorkowski, E.F., 335 Slominska, E., 335 Socha, M., 379, 417 Sokolowska-Mikolajczyk, M., 379, 417 Sower, S.A., 9 Sparks, N.H.C., 197 Speake, B.K., 197 Stegeman, J.J., 501 Strawn, J.R., 395

### Author Index

| Stup | oans, I., 39 |  |
|------|--------------|--|
| Sug  | ya, H., 315  |  |
| Sura | i, P.F., 197 |  |
| Suzi | ıki, T., 491 |  |

Tavares, A.P., 295 Trausch, G., 433 Triebskorn, R., 259 Tsubone, H., 511

Vörös, L., 167 Valles, S.M., 469 van de Loo, J.-W., 217 Varela, N., 161 Vehovszky, A., 167 Viana, G.S.B., 521 Viarengo, A., 217, 447 Vidal, M.-L., 133, 477 Viotti, A.P., 295

Wang, D.-Y., 1 Watanabe, M., 491 Wautier, K.G., 73 Weber, L.P., 51 Weber, L.P., 387 Wood, C.M., 367 Woodson, W.D., 469

Yada, T., 93 Yagi, Y., 511 Yeh, Y.-H., 1 Yoshinari, K., 501 Yueh, W.-S., 345

Zubir, D., 123

